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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/346,375	07/01/1999	ROBERT CLEMENT	2170.00019	2343

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EXAMINER	
ELVE, MARIA ALEXANDRA	

ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/346,375	CLEMENT ET AL.	
	Examiner	Art Unit	
	M. Alexandra Elve	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,13-21,23-42 and 44-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-10,13-21,23-42 and 44-46* is/are allowed.

6)☒ Claim(s) *47-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 September 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/184,186.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

Claims 47-51 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 19 & 22 of copending Application No. 09/184,186. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burkart et al. (CN Pat. 2,073,092) in view of Gofuku et al. (US Pat. 5,269,868) and Muncheryan (US Pat. 4,808,789).

Burkart et al. teaches a method for separating two elements whereby the adhesive joint is loosened or destroyed (abstract, p. 19, lines 12-27 and figure 6). This releasable adhesive joint is especially useful in fixing vehicle glass panes to a vehicle body frame (abstract). The object of the releasable adhesive joint is to aid in the quick, convenient and efficient repair or disassemble of a vehicle pane (p. 2, lines 13-25). The heating of the joint results in loosening the adhesion or even destroying it, that is, the

adhesive joint is weakened or destroyed so that the two elements, vehicle pane and frame, separate with ease (p. 4, lines 10-18). Included in the list of suitable materials, which may be used, as a separating member between the two elements is a polyurethane based material (p. 8, lines 15-28 and p. 9, lines 1-8). A specific embodiment (figure 6) shows a glass pane mounted to a vehicle frame wherein there are two adhesive beads comprising the joint. No extra or separate heat separating member is used because one of the two beads is made of a material that is separable either by loosening or damage or destruction (carbonize: destruction of organic substances). Separation may be effected under the influence of high frequency, microwave or infrared radiation. This would encompass the use of a laser. Additionally, it is required that the selected radiation could reach the place where heating should occur, be it due to the geometry of the adhesive bond or due to the type of material of one of the elements (p. 11, lines 8-22, p. 19, lines 12-27).

Burkart et al. does not disclose absorbing laser energy into the adhesive, although this is inherent in the heating of the adhesive joint by radiation. Additionally, the use of only one adhesive bead is not disclosed, although this would be an obvious variation in light of fabrication ease and manufacturing economies.

Gofuku et al. teaches a method of separating bonded substrates in which an energy beam is transmitted through one of the substrates and absorbed by the adhesive (abstract). Specifically, the screen of a liquid crystal display device is disassembled from its wiring frame (figure 4). The main substrate is a transparent glass screen. The adhesive is made of a polymer material (col. 1, lines 21-34). The method of

separating the bonded substrates is conducted using an irradiating energy beam on the bonding portions of the bonded substrates to separate one substrate from the other. The energy beam transmits through one substrate and is absorbed into the adhesive (col. 3, lines 3-13). The chemical connection between the adhesive and substrate is thought to be cut or changed (this would encompass carbonization of the adhesive) due to the irradiation of the laser, thereby allowing the adhesive and substrates to be separated at the bonding surfaces (col. 4, lines 24-29). Laser sources may include excimer, Nd-Yag, Xe, Ar, CO_2, copper vapor lasers and so forth (col. 5, lines 1-7). Adhesives, which may require separation, can include urethane adhesives (col. 5, lines 13-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to use one adhesive bead which absorbs laser energy, as taught by Gofuku et al. in the Burkart et al. separation method, because one adhesive bead is a manufacturing variant and would ease the fabrication of vehicle windscreen/body construction. Furthermore, laser heating of an adhesive typically would entail absorbing the energy beam.

Burkart et al. and Gofuku et al. disclose the use of infrared, excimer, Nd-Yag, Xe, Ar, CO2, copper vapor lasers and so forth; however, some fundamental details of lasers are not taught.

Muncheryan teaches that a high-quality laser beam is generated using a solid state laser rod, which may be pumped by laser diodes. Laser radiation may also be Q-switched to achieve high-power laser outputs at short pulses, such as nanoseconds. These are characteristically important in precision areas such as medical surgery,

semiconductor circuit development work, military applications and so forth (col. 1, lines 5-10, 25-34 and col. 3, lines 28-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to note laser specifications, as taught by the Muncheryan diode-pumped laser instrumentation system, in the Burkart et al. and Gofuku et al. method because these are routine fabrication practices which, when recorded, would help to enhance the precision adhesion separation or destruction.

Burkart et al., Gofuku et al. and Muncheryan do not teach safety mechanisms. Trost discloses the use of a hand held laser scanner. In using the scanner, the operator turns on the laser system and then manually opens a safety shutter. Following this the operator depresses a foot pedal, which aligns the mirrors and allows for the delivery of one beam spot. (abstract, col. 6, lines 44-63)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use manually safety devices, shutter and foot pedal, as taught by Trost in the Burkart et al., Gofuku et al. and Muncheryan system because laser safety practices are standard in the industry.

Allowable Subject Matter

Claims 1-10, 13-21, 23-42 & 44-46 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach time elapsing after a preceding pulse event, and the use of a non-laser pulsed light energy.

Response to Remarks

Applicant's arguments with respect to claims 47-51 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 6:30-3:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 21, 2004.

M. ALEXANDRA ELVE
PRIMARY EXAMINER